

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Authorizing Permissive Use of the “Next
Generation” Broadcast Television Standard

GN Docket No. 16-142

REPLY COMMENTS OF MICROSOFT CORPORATION

The Commission’s goal in this proceeding is to enable a simple, voluntary transition to ATSC 3.0 that allows broadcasters the flexibility to use a new format within their existing spectrum rights. This goal is consistent with the stated purpose of the original Petition of the National Association of Broadcasters. Unfortunately, some parties are now seeking to take advantage of this proceeding to expand their spectrum rights unjustifiably, despite the fact that NAB assured the FCC that “[n]o additional spectrum is required or requested.”¹ Furthermore, some commenters propose to delay the repack directly, and others propose measures that would clearly delay it indirectly—positions that are inconsistent with broadcasters’ representations that approval of ATSC 3.0 would “not delay this transition or add cost.”²

The Commission should reject these opportunistic new requests. They would undermine investment in wireless broadband by both licensed and unlicensed stakeholders and expand the

¹ Joint Petition for Rulemaking of America’s Public Television Stations, AWARN Alliance, Consumer Technology Association, and National Association of Broadcasters at iii (filed Apr. 13, 2016) (“Petition”). Unless otherwise indicated, all documents filed with the Commission referenced herein were filed in GN Docket No. 16-142 on May 9, 2017.

² Letter from Rick Kaplan, General Counsel and Executive Vice President, Legal and Regulatory Affairs, National Association of Broadcasters, to Marlene H. Dortch, Secretary, FCC, at 3, MB Docket No. 16-142 (filed May 16, 2016).

technical and policy implications of this proceeding well beyond those addressed by the NPRM³ and the petition. Microsoft has no objection to allowing broadcasters substantial flexibility in how they use their existing spectrum, within their existing geographic footprint—which is all that broadcasters sought in their petition. But Microsoft opposes the adoption of new rules that would grant broadcasters expanded spectrum rights and undermine wireless broadband.

I. The Commission Should Not Frustrate Investments in Licensed and Unlicensed Wireless Broadband By Allowing Broadcasters to Delay the Repack or Expand Their Spectrum Rights.

Parties from both the licensed and unlicensed wireless broadband industries have urged the Commission not to make any changes that would introduce further uncertainty and delay in the post-Incentive Auction environment. CTIA, for example, urged the Commission to “not do anything that would delay or interrupt the 39-month post-auction repacking process” as this “would harm wireless bidders’ reasonable expectations regarding the use of spectrum won at auction.”⁴ Similarly, the Wi-Fi Alliance “strongly oppose[d]” allowing broadcasters to claim additional channels as dedicated simulcast spectrum because “[d]iverting the use of limited vacant channels for ATSC 3.0 implementation will exacerbate the likely scarcity of spectrum for unlicensed operations.”⁵ These concerns, from both the licensed and unlicensed wireless industries, are important and interrelated.

As Microsoft explained in its initial comments, granting broadcasters the right to claim exclusive rights to additional channels for simulcasts without internalizing the cost of acquiring

³ *Authorizing Permissive Use of the “Next Generation” Broadcast Television Standard*, Notice of Proposed Rulemaking, FCC 17-13, 2017 WL 735664 (rel. Feb. 24, 2017).

⁴ Comments of CTIA at 3-4. *See also* Comments of T-Mobile USA, Inc. at 3-7.

⁵ Comments of Wi-Fi Alliance at 4. *See also* Comments of Dynamic Spectrum Alliance at 1-2; Comments of Consumers Union, Public Knowledge, and New America’s Open Technology Institute at 23-27.

those channels is economically and spectrally inefficient, would undermine wireless broadband investors already coping with significant regulatory uncertainty as a result of the Incentive Auction, and is inconsistent with FCC spectrum policy. Moreover, white-spaces technology is already in use across the United States, connecting Americans in rural and urban communities. Indeed, in the period since the close of the Incentive Auction:

- The Gigabit Libraries Project has awarded grants to “[s]upport access and inclusion to underserve[d] populations”⁶ using white-spaces technology in Lansing, MI; Gaylord, MI; Marquette, WI; State College, PA; Millinocket, ME; Milledgeville, GA; Beatrice, NE; Huron, SD; and Toppenish, WA.⁷
- The Mid-Atlantic Broadband Communities Corp. and Microsoft, with support from the Virginia Tobacco Region Revitalization Commission, launched a new white-spaces system to connect otherwise-unconnected students to their school’s networks in Charlotte and Halifax counties in Southern Virginia.⁸
- Microsoft expanded the use of white-spaces technologies for precision agriculture using an experimental license granted by the FCC in March 2017.⁹

If the Commission grants broadcasters the ability to claim vacant channels for simulcasts, these projects, and projects like them throughout the United States, could be forced off the air because broadcasters could inefficiently occupy spectrum that they specifically said they *do not need* to support the ATSC 3.0 transition and simulcast period.¹⁰

Although broadcasters may claim that these new channels would be “temporary,” this is true in only the most theoretical sense. Broadcasters seek the right to occupy two channels for

⁶ Gigabit Libraries Network, “*Beyond the Walls*” Awards, <http://giglibraries.net/Beyond-the-Walls>.

⁷ Gigabit Libraries Network, *Winning Projects*, <http://giglibraries.net/Winning-Projects>.

⁸ Letter from Paul Garnett, Senior Director, Affordable Access Initiatives, Microsoft Corporation, to Marlene H. Dortch, Secretary, FCC, ET Docket Nos. 13-49, 14-165 and MB Docket No. 15-146 (filed May 31, 2016).

⁹ See Microsoft Corporation, Application for New or Modified Radio Station Under Part 5 of FCC Rules, File No. 0136-EX-CN-2017 (submitted Mar. 3, 2017).

¹⁰ Petition at iii.

the entire duration of the ATSC 3.0 simulcast period—and neither broadcasters nor the Commission have proposed a date by which the simulcast period would end. The conclusion of the simulcast period could extend at least until ATSC 3.0-compatible equipment is widely available in the marketplace, and when ATSC 3.0-compatible televisions have largely replaced the installed base of ATSC 1.0 televisions. Given that there are zero ATSC 3.0-compatible televisions available to American consumers today, this period will likely last for many years, if not more than a decade. A decade of blocked spectrum access and uncertainty is hardly temporary in any meaningful sense. The reality is that Commission approval of simulcast channels will have the immediate effect of denying consumers access to spectrum for white-space devices, and will further chill investment in a broadband technology that would otherwise have been used to affordably connect communities unserved by other networks, especially in rural areas.

The creation of new simulcast channels, rather than co-channel simulcasts as originally proposed by NAB, may also frustrate licensed operators' investment in the Incentive Auction. The addition of new television channels in the middle of the repack would surely complicate the repack process, and may require the Commission to reconsider the channel assignments it just announced in the Channel Reassignment Public Notice.¹¹ At the very least, these new channels will raise new co- and adjacent-channel constraints. In addition, if permitted to create these new channels, broadcasters will inevitably seek advantageous spectral and geographic locations for these stations—since the simulcast stations, not the ATSC 3.0 stations, will be the ones viewed

¹¹ *Incentive Auction Closing and Channel Reassignment*, Public Notice, DA 17-314, 2017 WL 1364700 (rel. Apr. 13, 2017).

by U.S. consumers for the foreseeable future—and coordinate their operation with repack deadlines. This would complicate the repack even further, and greatly increase the risk of delay.

In fact, some broadcasters have already begun to explicitly raise the possibility of delaying the post-auction repack in order to allow broadcasters to more efficiently transition to ATSC 3.0. Univision has proposed that the Commission “reassess the 39 month repack timeframe . . . with the goal of facilitating deployment of ATSC 3.0 so that broadcasters are not forced to upgrade equipment twice (once for the repack and once for the ATSC 3.0 transition) based on an artificial timetable.”¹²

The Commission should reject this proposal which, if entertained, would impose new uncertainty on licensed and unlicensed wireless broadband investors. There is nothing “artificial”¹³ about the 39-month repack timetable. This is the deadline that the Commission announced nearly five years ago in its Incentive Auction Report and Order and is the timeframe upon which forward auction participants reasonably relied in planning their businesses and designing their bidding strategies in the Incentive Auction.¹⁴ The Commission should not upset those expectations by delaying the repack, and mobile licensees’ deployment schedules, when broadcasters have admitted that they do not need the grant of new spectrum rights to complete their voluntary ATSC 3.0 transition. Broadcasters have had ample notice of the Incentive Auction timetable and opportunity to coordinate the ATSC 3.0 transition with the repack, without introducing additional delay. Petitioners themselves appear to have made good use of

¹² Comments of Univision Communications Inc. at 8.

¹³ *Id.*

¹⁴ *See* Comments of CTIA at 4.

this time and emphasize that there is, indeed, no need to delay the repack just to accommodate the ATSC 3.0 transition.¹⁵

Microsoft understands broadcasters' desire to efficiently combine the ATSC 3.0 transition, for stations that choose to make it, with facility changes necessitated by the repack. To the extent that this can be achieved without disrupting the efforts of unlicensed and licensed operators to deploy expanded wireless broadband, Microsoft agrees that some form of coordination may be beneficial. However, broadcasters should not be permitted to externalize the costs of accomplishing this—a transition that they will undertake voluntarily, and of which they will be the primary beneficiaries—onto wireless broadband investors and consumers by injecting new uncertainty into the repack process or seeking to delay it outright.

II. The Commission Should Not Allow Broadcasters to Alter their Coverage Areas without Notice to the Public or Commission Review.

Several commenters confirmed Microsoft's warning that ATSC 3.0 may render the Commission's existing broadcast television planning factors obsolete. The new standard would allow operators to vary the signal-to-noise ratio needed to receive ATSC 3.0 content and permit single-frequency networks, where broadcast coverage could be a function of the signal received from multiple transmitters spread throughout a market, instead of a single antenna.¹⁶ Microsoft does not object to granting broadcasters some additional flexibility to use these capabilities to better serve viewers. However, broadcasters should not be permitted to freely expand their protected and interfering contours without Commission review and the opportunity for comment

¹⁵ See e.g., Comments of GatesAir Inc. at 6-7; Comments of America's Public Television Stations, the AWARN Alliance, the Consumer Technology Association and the National Association of Broadcasters at 23-24.

¹⁶ Comments of GatesAir Inc. at 9; Comments of ONE Media, LLC at 32-33; Comments of Rolando Bettancourt and Marvin A. Sirbu at 1.

by interested parties. Expanding contours would, of course, raise the possibility of new harmful interference to other operators in the band. Expanding protected contours would, in effect, grant new exclusive spectrum rights. Either outcome would clearly require careful review to ensure that these modifications and the valuable new rights that come with them are consistent with the public interest.

The Commission should not waive this requirement simply because adjacent stations have entered into a bilateral interference agreement.¹⁷ Broadcasters are not the only interested parties when a broadcaster proposes to alter its service contour. Most conspicuously, this approach would impermissibly deprive the public of any opportunity to comment on the merits of a proposed coverage expansion and it ignores the fact that the Commission's public interest review is not limited to the prevention of harmful interference between broadcasters.

Likewise, as Microsoft explained in its initial comments, it does not object to broadcasters' using ATSC 3.0's flexibility to fill in coverage within their existing contours, so long as the relevant field-strength contours are not affected. The Commission should make clear, however, that signals outside broadcasters' protected contours will remain just that: unprotected. These operations may receive interference from other operations in the band, and will not be protected by the white-spaces database, which calculates necessary separation distances based on broadcasters' field strength contours.

III. Conclusion

The petition that initiated this proceeding described an ATSC 3.0 transition that would be carefully managed to avoid any disruption to the Incentive Auction. NAB clearly stated that

¹⁷ See Comments of ONE Media, LLC at 33.

broadcasters did not require additional spectrum rights to complete the voluntary transition. While many broadcasters continue to maintain this position, a vocal minority now opportunistically propose to leverage the ATSC 3.0 proceeding to expand their spectrum holdings, and to delay the repack. The Commission should reject these attempts to broaden the scope and complexity of this proceeding, which would undermine investment in wireless broadband by both licensed and unlicensed operators.

Respectfully submitted,

/s/ Paula Boyd

Paula Boyd
*Senior Director, Government and
Regulatory Affairs*
Michael Daum
Director, Technology Policy

MICROSOFT CORPORATION
901 K Street NW, 11th Floor
Washington, DC 20001
(202) 263-5900

June 8, 2017